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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,189	10/26/2001	Michal Mlejnek	600-028 (SP02-016)	8722

20874 7590 03/16/2004  
WALL MARJAMA & BILINSKI  
101 SOUTH SALINA STREET  
SUITE 400  
SYRACUSE, NY 13202

EXAMINER

LAVARIAS, ARNEL C

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/066,189

Applicant(s)

MLEJNEK, MICHAL

Examiner

Arnel C. Lavarias

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) 15-29 and 43-55 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 30-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendments to the specification of the disclosure in the submission dated 12/24/03 are acknowledged and accepted. In view of these amendments, the objections to the specification of the disclosure in Section 5 of the Office Action dated 8/22/03 are respectfully withdrawn.
2. The amendments to Claims 1, 30, 40-42 in the submission dated 12/24/03 are acknowledged and accepted. In view of these amendments, the objections to the claims in Section 6 of the Office Action dated 8/22/03 are respectfully withdrawn.

### ***Response to Arguments***

3. The Applicant argues that, with respect to pending Claims 1-14, 30-42, the specification of the disclosure clearly teaches those of skill in the art how to make and use the invention. After a review of the Applicant's remarks (See in particular Page 3, Section 5 of the submission dated 12/24/03) and the amendments made to the specification above, the Examiner agrees, and respectfully withdraws the rejections under 35 U.S.C. 112, 1<sup>st</sup> paragraph, in Section 8 of the Office Action dated 8/22/03. The Examiner notes, however, that the Applicant's statement that 'the term "birefringence" is interchangeable with the term "refractive index inhomogeneity"' is incorrect. 'Birefringence' has been established in the art of polarization to be defined as the difference in the extraordinary refractive index and the refractive index of the ordinary

refractive index. The Applicant's term 'refractive index inhomogeneity' denotes any changes in refractive index, not necessarily due to birefringence. Thus, it is incorrect to say that an optical blank having an inhomogeneous refractive index throughout is birefringent. For example, materials having embedded refractive index gratings and piecewise conglomerations of materials having different refractive indices all have inhomogeneous refractive indices throughout, but are not birefringent.

4. The Applicant argues that, with respect to newly amended Claims 1 and 30, both Otani et al. and Levinson et al. fail to teach or reasonably suggest an optical device and method for transmitting light having a predetermined bandwidth of wavelengths, the optical device including an optical transparent component being characterized in that the component thickness is selected based on the predetermined bandwidth, the predetermined layer thickness, the predetermined layer refractive index, the at least one physical characteristic, and the component refractive index. After a review of the Otani et al. and Levinson et al. references, the Examiner agrees, and respectfully withdraws the rejections in Sections 10-11, 13-14 of the Office Action dated 8/22/03.
5. Claims 1-14, 30-42 are now rejected as follows.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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7. Claims 1-14, 30-42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1 and 30 recite the limitation of an optical device and method for transmitting light having a predetermined bandwidth of wavelengths, the optical device including an *optical transparent component being characterized in that the component thickness is selected based on the predetermined bandwidth, the predetermined layer thickness, the predetermined layer refractive index, the at least one physical characteristic, and the component refractive index* (Emphasis added). However, in reviewing the specification and drawings of the disclosure, no mention is made of choosing or selecting the value of the thickness of the optical transparent component (i.e. optical blank 20 in Figure 2 or 3, for example) based on all the following factors: predetermined bandwidth of the optical device, predetermined layer thickness of the at least one layer of the anti-reflective coating (See for example 12 in Figure 2 or 3), predetermined layer refractive index of the at least one layer of the anti-reflective coating (See for example 12 in Figure 2 or 3), at least one physical characteristic (Examiner believes this at least one physical characteristic to be the birefringence of the optical device), and component refractive index (See 20 in Figures 2 or 3). Page 1, line 19-Page 2, line 16 of Applicant's disclosure (including amendments newly made to the specification in the submission filed 12/24/03) discuss how the refractive index and thickness of the photomask contribute to the Fabry-

Perot interference ripple seen in Figure 1 of Applicant's disclosure. However, the selection of the thickness of the photomask, and in particular the criteria for making such a selection, has not been disclosed. Claims 2-14, 31-42 are dependent on Claims 1 and 30, and hence inherit the deficiencies of Claims 1 and 30.

### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5298312 to Oyama et al.

Oyama et al. is being cited to evidence the use of an antireflection film to reduce the Fabry-Perot interference ripple in the transmission output of a transparent element (See for example Figures 5-13; col. 5, line 37-col. 6, line 36; col. 8, line 16-col. 9, line 31; col. 11, line 5-col. 12, line 18). However, Oyama et al. lacks choosing the thickness of the substrate based on the predetermined bandwidth, the predetermined layer thickness, the predetermined layer refractive index, the at least one physical characteristic, and the component refractive index.

U.S. Patent No. 6187445 to Ito et al.

Ito et al. is being cited to evidence a birefringent plate (See for example Figures 1-3), wherein an antireflection coating is formed (See for example 3 in Figure 1) on the substrate (See 2 in Figure 1) to reduce or attenuate internally reflected light within the optical element. However, Ito et al. lacks choosing the thickness of the substrate based on the predetermined bandwidth, the predetermined layer thickness, the predetermined

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layer refractive index, the at least one physical characteristic, and the component refractive index.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 8:30 AM - 5 PM EST.

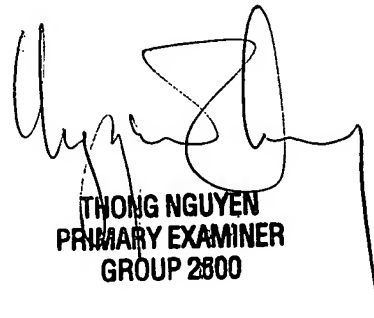
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arnel C. Lavarias  
3/1/04



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